



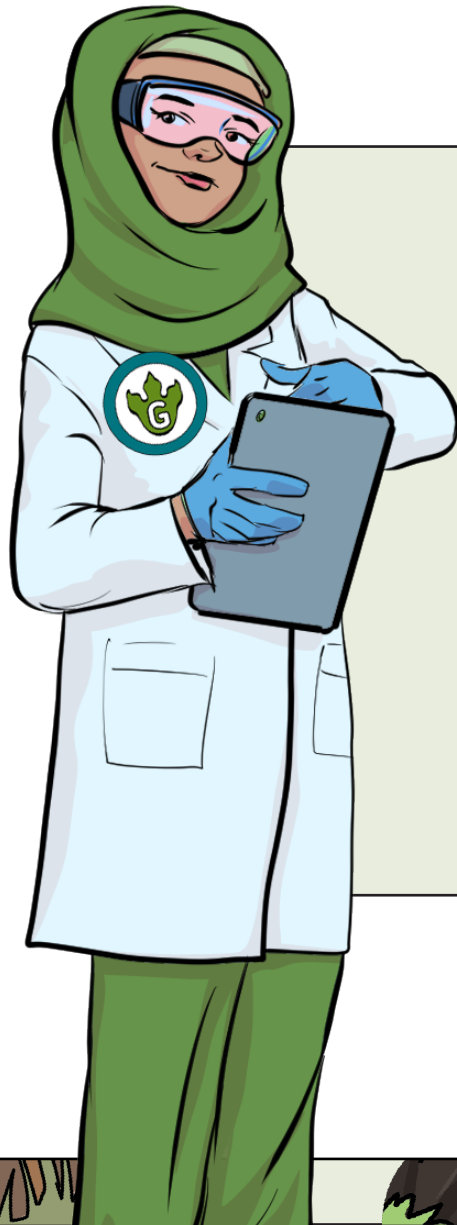
Living Things & their Habitats

**I understand that microorganisms are
also living things.**



Thinking Time

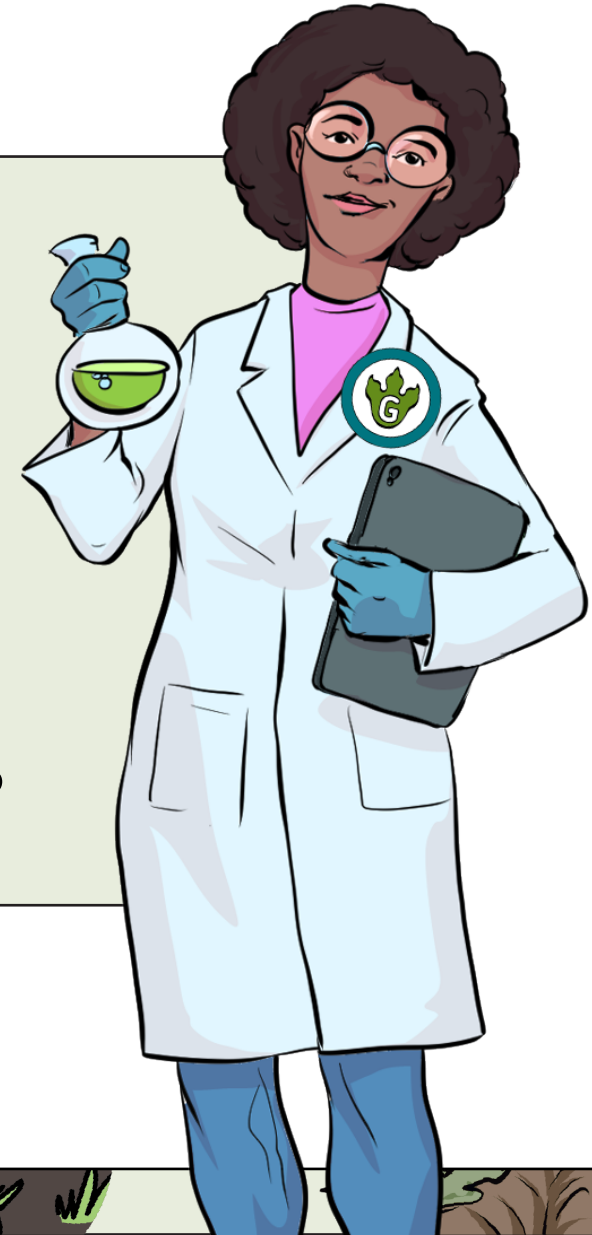
1



So far in this **topic**, we have looked at how we can **classify animals** and how we can **classify plants**.

Talk to your **partner**. How can we **classify** plants or animals?

How can we sort them into **groups**?



Thinking Time

Today we are going to be looking at a **different type** of living thing that is not an animal or a plant.

Can you **think** what it could be?

Clue one

You can't usually **see** this type of **living thing** without a **microscope**.

Clue two

Bakers and **food producers** use some of this type of **living thing** when creating food such as **bread, cheese and yoghurt**.

Clue three

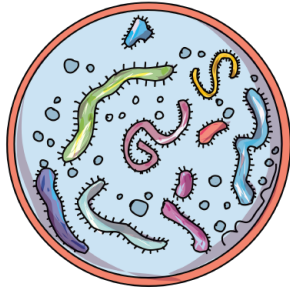
You could have **hundreds of thousands** of this type of **living things** on one of your **hands** right now!



Microorganisms!

Clue one

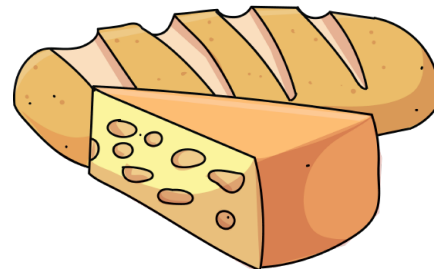
You can't usually **see** this type of **living thing** without a **microscope**.



Microorganisms are so **small**, you need a **microscope** to **see** them.

Clue two

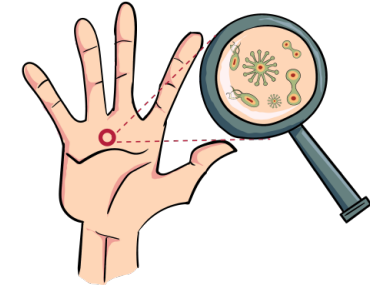
Bakers and **food producers** use some of this type of **living thing** when creating food such as **bread, cheese and yoghurt**.



Microorganisms are used to help bread to **rise** and to make cheese **taste nice**!

Clue three

You could have **hundreds of thousands** of this type of **living things** on one of your **hands** right now!



There are **microorganisms** everywhere so we **pick** many up on our **hands**.



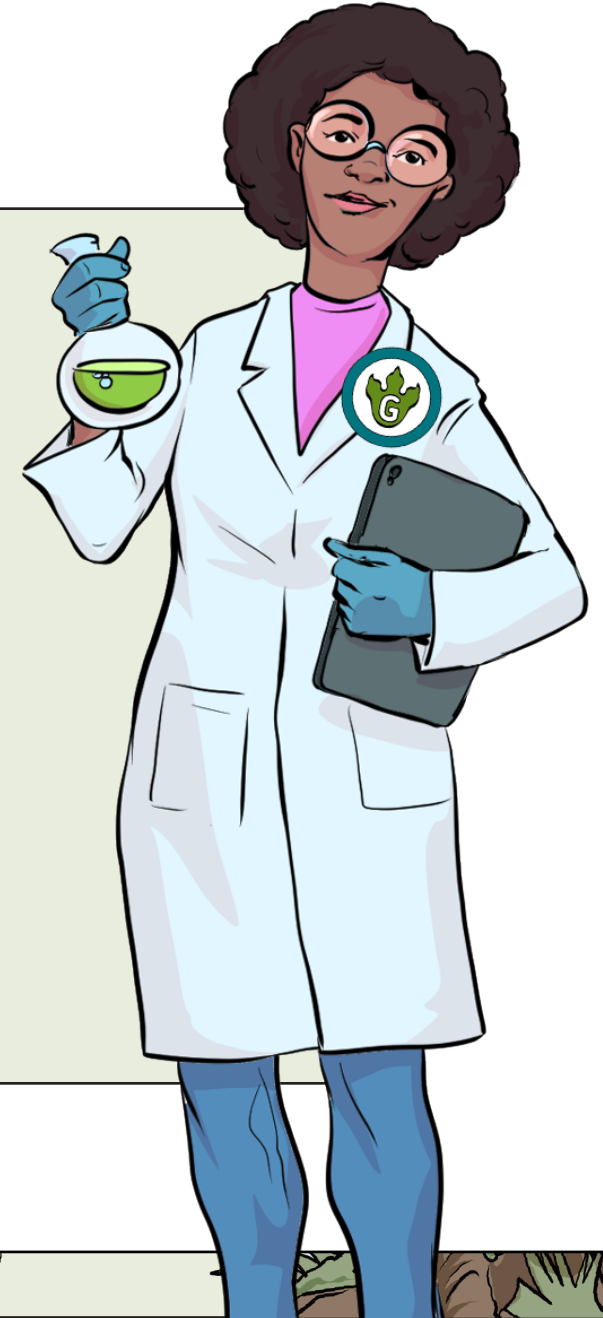
Microorganisms



Microorganisms (also known as **microbes**) cannot be seen by the **naked eye**. Hundreds of them could fit on the full stop at the end of this sentence.

They are found **everywhere**, in soil, air, water, on your skin and in your body.

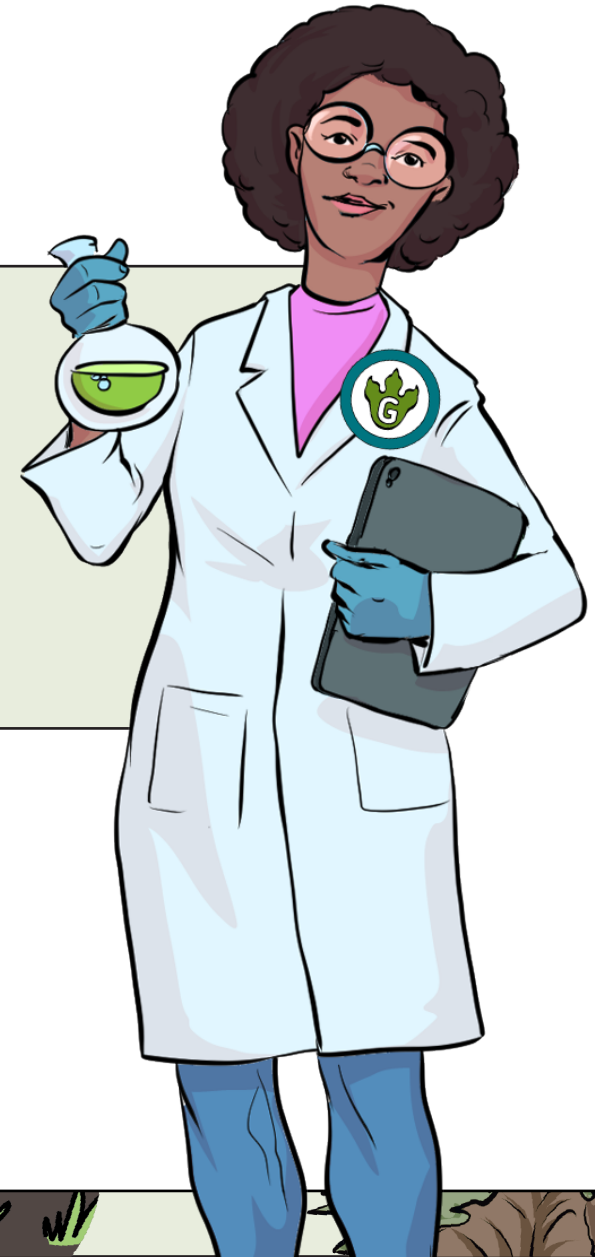
Microorganisms are the **largest group** of living things on our **planet**. There are **trillions** of **microbes** on the **Earth**.



Discussion Time



Are **microorganisms** good or bad?
Discuss with your **partner** before we
discuss as a **class**.



Good or bad?

Most of the time, when they are in the right place the **majority** of microorganisms are **not harmful** to people and often do a lot of **good** such as breaking down waste and making bread. We **couldn't live** without them!

Sometimes they **can be harmful** to people. They can make us **ill**. Some can get into your **digestive system** and make you **sick**. Others can give you a **cold**. Others can give you **infectious diseases** like chicken pox or measles.



Microorganisms

Have you ever left food **too long** in your cupboard or fridge? This can **allow** microorganisms to **grow**!

Mould is a type of microorganism. On the **piece of bread** in the picture, there will be **millions** of microorganisms **growing**. Mould **grows** on food. The tiny cells of mould are called **spores**. Mould spores live in the **air** all the time but when the mould spores land on food, they **grow** and **thrive** by feeding off it.

Mould spores feed themselves by producing **chemicals** that break down the food so the spores can **grow** while the food **rots away**.

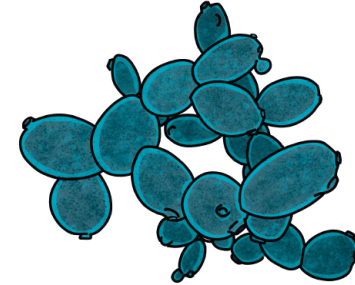


Microorganisms



dust mites

Dust mites eat **organic matter** like skin cells people have shed. **Dust** around you will contain the **faeces** of dust mites!



yeast

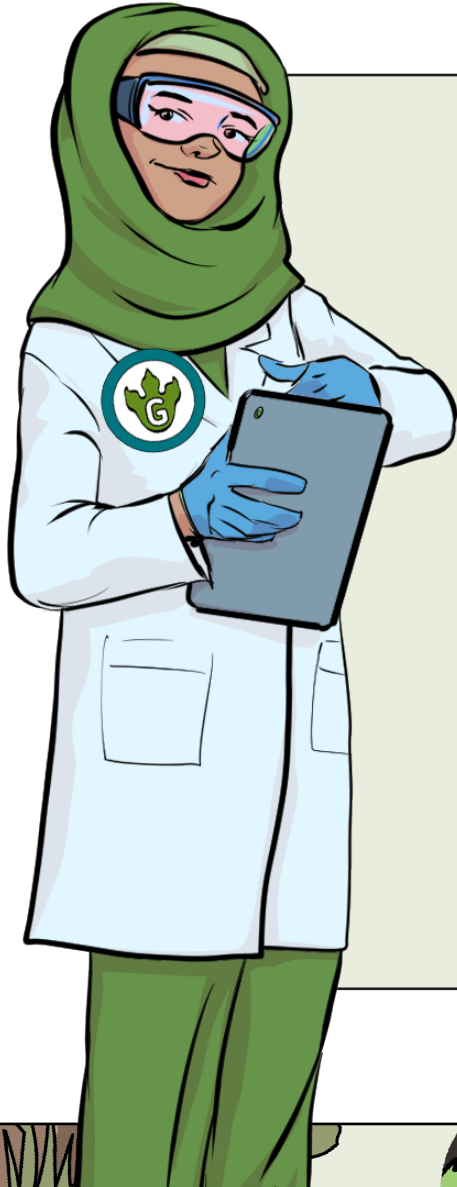
We use yeast when we are **baking** bread. The yeast consumes the **sugars** in the dough and gives off **carbon dioxide**. The carbon dioxide is a gas that adds the “**air gaps**” in bread.



Did you know that **doctors** will sometimes give **medicines** which **contain microorganisms**.



Class Investigation



We have just discussed that **yeast** is a **living thing**, but how do we **know**?

How can we **investigate** if yeast is a **living thing**?

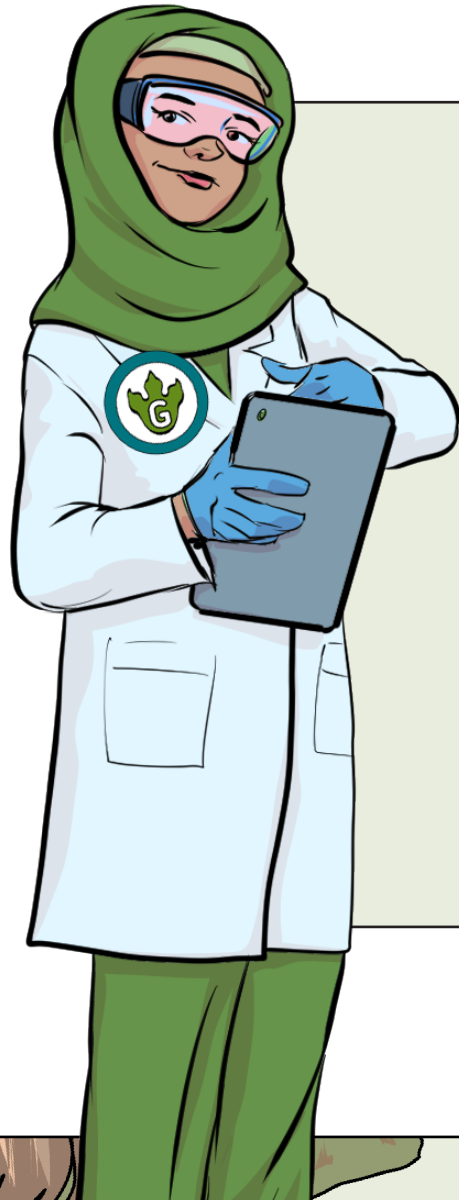
Think back to the **seven life processes**. What do all **living things** do?



Mrs. Gren



Class Investigation



How can we **investigate** if yeast is a **living thing**?

What do all **living things** do?

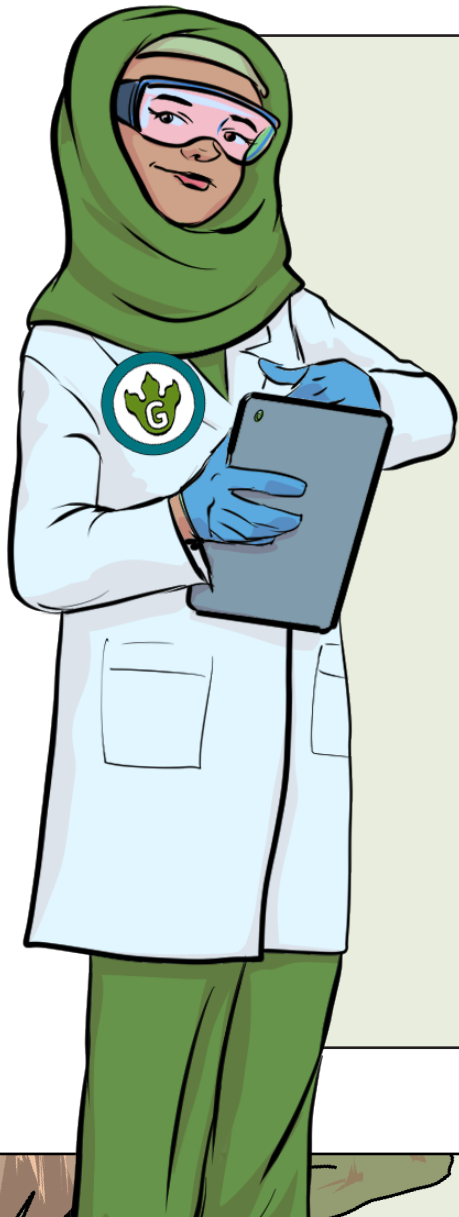
Which of these could we **test** to see if **yeast** is a **living thing**?

Movement
Respiration
Sensitivity

Growth
Reproduction
Excretion
Nutrition



Class Investigation



How can we **investigate** if yeast is a **living thing**?

What do all **living things** do?

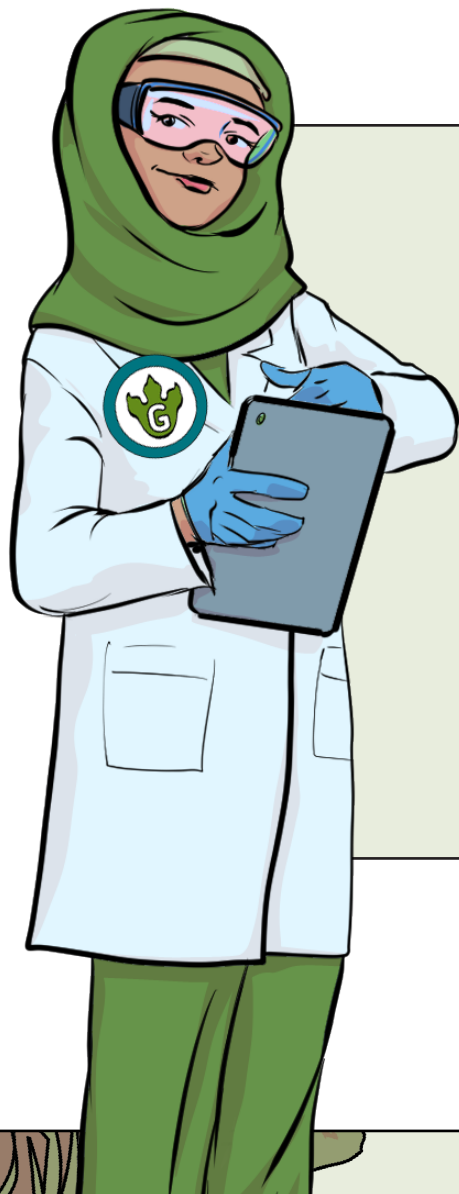
We have already discussed how yeast consumes **sugar** and gives off **carbon dioxide**. This is **respiration**. We can **investigate** if this is true.

Movement
Respiration
Sensitivity

Growth
Reproduction
Excretion
Nutrition



Class Investigation



Here are some instructions for a simple **investigation** to see if **yeast** really does give off **carbon dioxide**. If it does, it will begin to **inflate the balloon**.

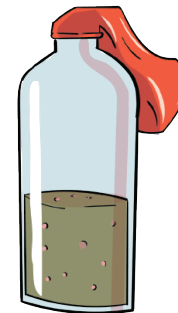
Is yeast a living microorganism?

You will need:

- one packet of yeast
- a small plastic bottle
- warm water
- one teaspoon of sugar
- a balloon

Method:

1. Pour two inches of warm water into the plastic bottle.
2. Add all of the yeast packet and gently swirl the bottle for a few seconds.
3. Add the sugar and swirl it around some more.
4. Blow up the balloon a few times to stretch it out then place the neck of the balloon over the neck of the bottle.
5. Let the bottle sit in a warm place for about twenty minutes.



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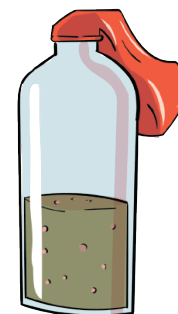
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Discussion Time



What happened to the **balloon**?

Why did it happen?

How could we **improve** the
investigation?

